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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,475	01/13/2006	Dominique Olivier	F-859 (31223.00071)	6843

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EXAMINER	
MCCLENDON, SANZA L	
ART UNIT	**PAPER NUMBER**
1796	
MAIL DATE	**DELIVERY MODE**
12/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/520,475	OLIVIER ET AL.	
	Examiner	Art Unit	
	Sanza L. McClendon	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-14,16-24 and 26-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-14,16-24 and 26-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the Amendment received on August 14, 2008 the examiner has carefully considered the amendments. The examiner acknowledges the cancellation of claims 15 and 25.

Response to Arguments

3. Applicant's arguments filed August 14, 2008 have been fully considered but they are not persuasive. Applicant appears to be arguing that because Saito et al teaches irradiation dosages above 20 kGy when used in the method, as taught by Saito et al, the combination of Saito et al with Charlier et al is unsustainable since the combination will result gelling of the PP, which according to applicant is unsuitable for the intended purpose of Saito et al and that Saito et al teaches away from the modifications of Charlier et al as argued by the examiner. Regarding applicant's arguments concerning the increase in the gel content being unsuitable for the intended purposes of Saito et al when irradiated with dosages above 20 kGy: One of ordinary skill in the art using the reference would understand the method of increasing the melt strength of a polymer, such as PP, could be used for other future intended purposes other then those referenced by Saito et al. Applicant statement regarding the gel content being unsuitable is a mere allegation without proof, especially since it is known that in thermoforming methods that gel content as high as 30% are acceptable in irradiated PP when used in thermoforming methods as evidenced by Lucas et al (5,439,949 and 5,266,607), wherein Lucas et al irradiates at dosage levels in the range of 100 to 200 kGy--see column5, lines 23-29. When looking at the comparative examples of Saito et al, it can be see in comparative example 1, the degree of gelling/crosslink density is 24.5%. Saito et al sets forth thermoforming in column 8, lines 15-16. Therefore, the examiner deems the combination of Saito et al and Charlier et al is sustainable and thusly still stands.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 12-14, 16-24, and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (5,560,886) in view of Charlier et al (6,669,919).

Saito et al sets forth processes for producing a modified polypropylene and molded products made therefrom. Said modification comprises irradiating said polymer propylene to produce a very high melt strength and superior stiffness and moldablity. Said polypropylene can be in homopolymer form or copolymer form, wherein said copolymers comprise olefins, such as ethylene and others found in column 4. Said copolymer can be crosslinked by the addition of a crosslinking agent, which can be introduced after the polymer is processed (polymerized) and prior to pelletization. Per column 6, Saito et al sets forth it is possible to melt-knead the crosslinking agent, in advanced of irradiating, followed by cutting into granular form to obtain pellets and then irradiating the pellets--see lines 49-53. Said irradiation can be carried out in air--see column 7, lines 28-29. Saito et al does not expressly teach this process to be done in a nitrogen atmosphere, however per examples said crosslinking agent is added under inert atmosphere conditions. Therefore the examiner deems that it is envisioned within the reference to pre-process in an inert atmosphere in the absence of evidence to the contrary and/or unexpected results. After the irradiation step said polypropylene pellets are heat treated to extinguish the free radicals generated during the irradiation step. This can be done by melt-kneading and then cutting into granules and palletized. Said heat treatment can be preformed in

air but an inert atmosphere, such as nitrogen, is preferred so not to introduce more free radicals into the processed polypropylene mixture. Saito et al teaches irradiating at an absorbed dosage or 3.0 kGy under the conditions of an accelerated voltage of 2MV and an electric current of 1.0 mA at a temperature of 20 °C, which is outside of the instantly claimed conditions. However it is known in the art of irradiation polypropylenes to use conditions such as using an electron beam having energy of 5 MeV and a power of 120 kW and an irradiation dose of 5 to 100 kGray to improve the melt strength of said polypropylene, such as taught by Charlier et al. Therefore the examiner deems that it would have been within the skill of an ordinary artisan, at the time of the invention, to use to irradiation conditions as set forth by Charlier et al in the method of modifying polypropylenes as taught by Saito et al since these conditions are known in the art. The motivation being a reasonable expectation of success as achieved by both reference by applying known methods to yield a predictable result, i.e. improved melt strength of polypropylene in the absence of convincing arguments to the contrary and/or unexpected results.

Regarding claims 22, 26-27, 30-31, these are deemed to be a matter of design choice of which, are within the skill level an ordinarily skilled artisan.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sanza L McClendon/
Primary Examiner,
Art Unit 1796

SMc

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